

### **REMARKS/ARGUMENTS**

Claims 1-16 are pending in this application. The Examiner has withdrawn claims 8-12 from consideration. In this Amendment, Applicant AMENDS claims 1, 3, 4, and 13-16.

In § 2 on page 2 of the outstanding Office Action, the Examiner stated that he did not consider two Japanese references (JP 44-000483 and JP 62-2420) because Applicant did not provide English translations or abstracts of the two Japanese references. Applicant respectfully submits that is not necessary to have provided either an English translation or abstract and respectfully requests that the Examiner consider these two Japanese references because Applicant submitted an English translation of the Japanese Office Action along with the two Japanese references that provides the statement of relevance for these two Japanese references as required by USPTO rules. The second paragraph of MPEP § 609.04(a) states:

Where the information listed is not in the English language, but was cited in a search report or other action by a foreign patent office in a counterpart foreign application, the requirement for a concise explanation of relevance can be satisfied by submitting an English-language version of the search report or action which indicates the degree of relevance found by the foreign office.

The Examiner asked about the relevance of WO 03/004014 and US 2006/0052357. Applicant submitted these references because they were cited in the Japanese Office Action issued in the counterpart Japanese application. Accordingly, Applicant respectfully requests that the Examiner fully consider WO 03/004014 and US 2006/0052357 and provide an initialed Form PTO SB08 indicating that these two prior art references have been considered by the Examiner.

In §§ 4 and 5 on page 3 of the outstanding Office Action, the Examiner objected to claims 3-5 and 13 for allegedly containing minor informalities.

With respect to claims 3, 4, and 13, Applicant has amended claims 3, 4, and 13 to correct the minor informalities noted by the Examiner.

With respect to claim 5, the Examiner alleged that the feature of "the signal" fails to have proper antecedent basis. Applicant respectfully submits that the feature of "a signal"

recited in the third line of claim 3 provides proper antecedent basis for the feature of “the signal” recited in claim 5.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the objection to claims 3-5 and 13.

On page 3 of the outstanding Office Action, the Examiner rejected claims 1, 15, and 16 under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. Applicant has amended claims 1, 15, and 16 to correct the informalities noted by the Examiner. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1, 15, and 16 under 35 U.S.C. § 112, second paragraph.

On page 4 of the outstanding Office Action, the Examiner rejected claims 1, 3, 5, and 6 under 35 U.S.C. § 102(b) as being anticipated by Herbert (U.S. 5,777,596). On page 5 of the outstanding Office Action, the Examiner rejected claims 2, 4, and 13 under 35 U.S.C. § 103(a) as being unpatentable over Herbert in view of Nakazono et al. (JP 9-251820). On page 6 of the outstanding Office Action, the Examiner rejected claims 14-16 under 35 U.S.C. § 103(a) as being unpatentable over Herbert in view of Morimura et al. (U.S. 6,714,666). On page 8 of the outstanding Office Action, the Examiner rejected claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Herbert in view of Nakazono et al. and further in view of Morimura et al.

Applicant respectfully traverses the rejections of claims 1-7 and 13-16.

Applicant's claim 1 has been amended to recite:

A display comprising:  
a capacitance sensor arranged to detect a presence of a user and  
including:  
a first electrode defined by a frontmost electrode of the display, the frontmost electrode defining a single electrode that is used both as a display electrode arranged to activate the display and as a sensing electrode of the capacitance sensor to detect the presence of the user; and  
a second electrode defined by one of:  
a case of the display; and  
a power terminal of a circuit that is arranged to drive or control the display and that is not arranged to oppose the first electrode to activate the display. (emphasis added)

Applicant's claim 13 recites features that are similar to the above-emphasized features recited in Applicant's claim 1.

In § 11 on page 4 of the outstanding Office Action, the Examiner alleged that segment electrode **16** of Herbert teaches the first electrode recited in Applicant's claims 1 and 13 and that rear electrode **18** of Herbert teaches the second electrode recited in Applicant's claims 1 and 13.

Applicant has amended claim 1 to recite the feature of "a second electrode defined by ... a power terminal of a circuit ... that is not arranged to oppose the first electrode to activate the display." Applicant has amended claim 13 to recite a similar feature.

Applicant's previously presented claims 1 and 13 recited the feature of "a second electrode defined by ... a power terminal of a circuit that is arranged to drive or control the display." Applicant has amended claims 1 and 13 to clarify that Applicant's invention does not use the rear electrode that is used to activate the display by amending claims 1 and 13 to recite the feature the power terminal "is not arranged to oppose the first electrode to activate the display." As explained in paragraph [0012] of US 2007/0279332, Applicant's capacitance sensor uses the front electrode of a display and "the ground point of the device." One of ordinary skill in the art would have understood "the ground point of the device" to be a power terminal that is not arranged to oppose the first electrode that is arranged to activate the display. The capacitor formed by the front and rear electrode of a display has a large capacitance (and correspondingly long charge time) because of the material (e.g., liquid crystal material and electroluminescent material) between the front and rear electrodes that is activated to cause information to be displayed. As explained in paragraph [0007] of Applicant's corresponding application publication US 2007/0279332, Applicant's capacitance sensor includes a pair of spaced apart electrodes whose capacitance is determined by the size of the electrodes, by the distance between them, and by the electrical nature of the medium between them.

In contrast to Applicant's claimed invention, Herbert uses the rear electrode **18** of the liquid crystal display element **10**, which is used to activate the liquid crystal display element **10**,

and the front electrode of display element to form a capacitor. See liquid crystal display element 10 on the right-hand side of Fig. 6 of Herbert. Further, Col. 2, ll. 1-13 of Herbert states:

In conceiving of the present invention, it was appreciated that the capacitance, and therefore the charge time when using a constant current source, of a liquid crystal display element increases when an external touch is applied to the element. In this regard, one aspect of the present invention includes: (a) a plurality of LCD elements, (b) means for applying a charge to each of the elements, c **means for monitoring a voltage across each of the elements and for using the voltage to compare the charge time of each of the elements to a reference charge time value**; and (d) means, responsive to the means for monitoring, for determining which, if any, of the LCD elements in the plurality are being touched. (emphasis added)

Thus, Herbert fails to teach or suggest the feature of “a second electrode defined by ... a power terminal of a circuit ... that is not arranged to oppose the first electrode to activate the display” as recited in Applicant’s claim 1 and as similarly recited in Applicant’s claim 13.

The Examiner has relied upon Nakazono et al. to allegedly cure various deficiencies in Herbert in rejecting Applicant’s claim 13. However, Nakazono et al., applied alone or in combination with Herbert, fails to teach or suggest the feature of “a second electrode defined by ... a power terminal of a circuit ... that is not arranged to oppose the first electrode to activate the display” in combination with the other features recited in Applicant’s claims 1 and 13.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(b) as being anticipated by Herbert and the rejection of claim 13 under 35 U.S.C. § 103(a) as being unpatentable over Herbert in view of Nakazono et al.

Applicant’s claim 14 recites:

A display comprising:  
a capacitance sensor arranged to detect a presence of a user and including a first electrode defined by a front electrode of the display; and  
a **protection diode arranged to protect the capacitance sensor from an excessive voltage on the front electrode and including:**  
a **first end connected to the front electrode of the display; and**

**a second end connected to at least one circuit element of the capacitance sensor. (emphasis added)**

In § 21 on pages 6 and 7 of the outstanding Office Action, the Examiner alleged that the combination of Herbert and Morimura et al. teaches the features recited in Applicant's claim 14.

Applicant has amended claim 14 to recite the feature of "a protection ~~member~~diode arranged to protect the capacitance sensor from an excessive voltage on the front electrode." Support for this feature is found, for example, in Applicant's claim 7, in Fig. 1 of Applicant's Drawings, and in paragraph [0023] of Applicant's corresponding application publication U.S. 2007/0279332.

In the last paragraph on page 6 of the outstanding Office Action, the Examiner admitted that Herbert fails to teach or suggest the use of a protection member. Accordingly, Hebert must also fail to teach or suggest the use of a protection diode. Thus, Herbert fails to teach or suggest the feature of "a protection diode arranged to protect the capacitance sensor from an excessive voltage on the front electrode" as recited in Applicant's claim 14.

In the first paragraph on page 7 of the outstanding Office Action, the Examiner alleged that transistor Q4 shown in Fig. 4 of Morimura et al. teaches the feature of a protection member that was recited in Applicant's claim 14. Although the transistor Q4 includes a parasitic diode D1, as shown in Fig. 5 of Morimura et al., one end the parasitic diode D1 is connected to the power supply voltage VDD and is not connected to either the front electrode of the display or to a circuit element of the output circuit 220, which the Examiner alleged corresponds to the feature of the capacitance sensor as recited in Applicant's claim 14. Thus, Morimura et al. fails to teach or suggest a protection diode including "a first end connected to the front electrode of the display" and "a second end connected to at least one circuit element of the capacitance sensor" as recited in Applicant's claim 14.

The parasitic diode D1 of Morimura et al. is arranged to turn on to conduct current away from the transistor Q4. See, for example, col. 7, ll. 54-59 of Morimura et al. In contrast, the

protection diode of Applicant's claimed invention protects the capacitance sensor by not turning on and by preventing current from flowing into the capacitance sensor.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 14 under 35 U.S.C. § 103(a) as being unpatentable over Herbert in view of Morimura et al.

Accordingly, Applicant respectfully submits that the prior art of record, applied alone or in combination, fails to teach or suggest the unique combination and arrangement of elements recited in claims 1, 13, and 14 of the present application. Claims 2-7, 15, and 16 depend upon claims 1 and 14 and are therefore allowable for at least the reasons that claims 1 and 14 are allowable. Applicant respectfully requests that the Examiner rejoin, consider, and allow claims 8-12 when generic claim 1 is allowed.

In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

To the extent necessary, Applicant petitions the Commissioner for a TWO-month extension of time, extending to January 18, 2011 (January 16, 2011 falls on a Sunday and January 17, 2011 is a federal holiday), the period for response to the Office Action dated August 13, 2010.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

Dated: January 18, 2011

/Peter Medley #56,125/  
Attorneys for Applicant

**KEATING & BENNETT, LLP**  
1800 Alexander Bell Drive, Suite 200  
Reston, VA 20191  
Telephone: (571) 313-7440  
Facsimile: (571) 313-7421

Joseph R. Keating  
Registration No. 37,368  
  
Peter Medley  
Registration No. 56,125